

Finding the gender differences on COVID-19 related stress and anxiety among students**Dr. Hudda Ahmad¹, Rabia Sajjad², Dr. Yumna Ahmad¹, Dr. Usman Amin Hotiana³**¹Allama Iqbal Memorial Teaching Hospital, Sialkot²Lecturer Government College Women University Madina Town, Faisalabad¹Allama Iqbal Memorial Teaching Hospital, Sialkot³Head of Psychiatry and Behavioural Sciences Department, Rashid Latif Medical and Dental College**Corresponding Author:** Dr Huda Ahmad, Allama Iqbal Memorial Teaching, Sialkot. **E-mail:** yumnaahmadch@gmail.com. **Contact:** 0092-331-6193621**Conflict of interest:** None**Funding Source:** None**Abstract**

Introduction: The time of the COVID-19 pandemic can be emotionally challenging and stressful to all persons affected, and in particular those sub-groups of the population that are at an increased risk of mental health problems. **Objectives:** The main objective of the study is to analyse the gender differences on COVID-19 related stress and anxiety among students. **Material and methods:** This cross sectional study was conducted in Allama Iqbal Memorial Teaching Hospital, Sialkot during June 2020 to November 2020. The data was collected through non-probability consecutive sampling technique. The data was collected from students of final year and those who were doing house job. **Results:** The data was collected from 200 male and female participants. The mean age of the study patients was 24.4 ± 10.6 years. Anxiety was much more common in men than in women (32.6% vs. 0, $p < 0.001$). In response to a question about social distancing, "Do you think it is necessary to avoid approaching people as much as possible until the COVID-19 situation is controlled?" 157 people answered yes. **Conclusion:** It is concluded that stress significantly related to age, sex, employment status and education. It is apparent that the COVID-19 pandemic is having a substantial impact on post-secondary students' academic experience, social relationships, and mental well-being.

Key words: COVID-19, Stress, Anxiety, Depression

Introduction

The time of the COVID-19 pandemic can be emotionally challenging and stressful to all persons affected, and in particular those sub-groups of the population that are at an increased risk of mental health problems. One such vulnerable group constitutes university students. The COVID-19 pandemic creates complex problems and in almost all aspects of life, everyone has been anxious, worried, and panicked about survival. Starting with children, young and old, men and women feel anxious about the threat of COVID-19 [1].

Further, the convenience and the speed of disseminating information on the social media result in overwhelming news including the prevalence, mortality, confirmed cases and high contagion of COVID-19 as well as tragic report of ceases patients and families. Studies report the stress stemming from quarantine and overwhelming news associates with depression and anxiety; however, little is known about since the outbreak [2].

It has been well established that women are in greater risk for psychological problems than men, because of the interactions between biological factors and social determinants including gender stereotypes and roles, social stigma and inequity, and social autonomy [3]. The latest national study in China reported the 12-month prevalence of any mood disorders and any anxiety disorder was 3.50 and 4.80% in males, 4.60 and 5.20% in females [4]. The gender differences lead to a variety of physical and mental health outcomes. For example, depressive disorder is the 16th leading cause of burden of disease for male in China and it is the 5th for female; in comparison, anxiety disorder is the 17th leading cause of burden of disease for females in China and it is not in the top 25 leading cause of burden of disease for males [5]. More importantly, the comorbid depression and anxiety is more common in females. In

specific, given attaining or maintaining face is related to reactions toward conflicts, males may feel losing face if their partners were experiencing mental disorders due to the public stigmatization, and violence against women has then become a possible way to save and gain face to show off the dominance and masculine [6].

Sex is one such factor for concern. Clear sex differences have been shown to exist in exposure to potentially traumatic events and subsequent PTSD, and other studies have found females to be more vulnerable to developing mental or physical problems in response to life stressors or potentially traumatic events [7]. While early research has suggested that female medical workers may experience or respond more negatively to COVID-19-related events [8], the impact on psychological stress affected has not been fully investigated.

Objectives

The main objective of the study is to analyse the gender differences on COVID-19 related stress and anxiety among students.

Material and methods

This cross sectional study was conducted in Allama Iqbal Memorial Teaching Hospital, Sialkot during June 2020 to November 2020. The data was collected through non-probability consecutive sampling technique. The data was collected from students of final year and those who were doing house job. There were 200 participants in this study. Both male and female

students were enrolled in this study. The data was collected through systematically designed questionnaire which include questions related to stress and anxiety during COVID-19 among male and female students.

Measurement of stress

Psychological distress assessment was carried out using the Depression Anxiety Stress Scale (DASS-42) instrument, which includes measurements for items of anxiety, stress, and depression. There were five categories of psychological distress, namely normal psychological distress when scores 0 to 25, mild psychological distress when scores 26 to 50, moderate psychological distress when scores 51 to 75, high psychological distress when scores 76 to 100, and psychological distress very high when scores 101 to 126.

Statistical analysis

The data was collected and analysed using SPSS version 19. All the values were expressed in mean and standard deviation.

Results

The data was collected from 200 male and female participants. The mean age of the study patients was 24.4 ± 10.6 years. Anxiety was much more common in men than in women (32.6% vs. 0, $p < 0.001$). In response to a question about social distancing, "Do you think it is necessary to avoid approaching people as much as possible until the COVID-19 situation is controlled?" 157 people answered yes. Among those who answered yes to this question and those who answered no, there was a significant relationship with gender ($p < 0.05$), but no significant relationship was found between the type of response and the level of education and marital status ($p > 0.05$).

Table 01: Characteristics of Respondents Based on Psychological Distress Level

	All patients		
	Male	Female	<i>P-value</i>
Age, years	21.20±10.70	23.95±9.53	<0.001
BMI, kg/m ²	27.36±4.55	28.04±4.25	0.237
Hypertension	122	78	0.027
Diabetes	4 (4.5)	36 (20.7)	0.001

Table 02: Characteristics of Respondents Based on Anxiety, Stress, and Depression

Emotions	I Do Not Feel It 0 N (%)	Lightly 1 N (%)	Moderately 2 N (%)	Quite Intensely 3 N (%)	Intensely 4 N (%)	Mean (SD)
Stress	59 (16.6)	146 (41.0)	85 (23.9)	51 (14.3)	15 (4.2)	1.49 (1.06)
Anxiety	58 (16.3)	133 (37.4)	84 (23.6)	59 (16.6)	22 (6.2)	1.59 (1.13)
Concern	12 (3.4)	94 (26.4)	106 (29.8)	87 (24.4)	57 (16.0)	2.23 (1.11)
Depression	90 (25.3)	70 (19.7)	85 (23.9)	66 (18.5)	45 (12.6)	1.74 (1.35)
Anger	157 (44.1)	83 (23.3)	43 (12.1)	40 (11.2)	33 (9.3)	1.18 (1.35)

Discussion

The world is facing the COVID-19 pandemic, which has caused widespread fear among communities. Protocols, such as social distancing and handwashing recommended prevent the spread of the virus [9]. Therefore, this study was conducted to investigate the relationship between anxiety, self-compassion, and gender differences with self-care behaviors and fear of COVID-19. The findings of this study are consistent with those of other studies that have examined other psychological aspects of people with the disease [10].

About the fear of COVID-19, the variables of marital status, anxiety, and the component of common humanity positively correlated with the degree of fear of COVID-19. On the other hand, the component of self-judgment was negatively related to this fear. To explain the findings, it can be stated that in this time, people's worries naturally increase, and in the meantime, people are more concerned about the effects of quarantine on health and educational status of their family members [11]. Also, because this disease has spread worldwide and people are exposed to a common virus and have not yet been able to find a vaccine, it has caused a general fear of the disease. People showed more negative emotions (anxiety, depression, and anger) and less positive emotions after COVID-19 was announced as a pandemic by the World Health Organization (WHO) [12]. Therefore, fear and anxiety play a functional role in this situation [13]. These findings are consistent with those of previous studies showing that epidemics, such as SARS and COVID-19) have caused negative emotional responses such as fear [14]. The findings are also in line with Taylor's study, which found a large number of people tend to experience significant clinical fear and anxiety when an infectious disease spreads [15].

Conclusion

It is concluded that stress significantly related to age, sex, employment status and education. It is apparent that the COVID-19 pandemic is having a substantial impact on post-secondary students' academic experience, social relationships, and mental well-being.

References

1. Cao W, Fang Z, Hou G, Han M, Xu X, Dong J, et al. The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Res.* (2020) 287:112394. doi: 10.1016/j.psychres.2020.112934
2. Casagrande M, Favieri F, Tambell R, Forte G. The enemy who sealed the world: effects quarantine due to the COVID-19 on sleep quality, anxiety, and psychological distress in the Italian population. *Sleep Med.* (2020) 75:12–20. doi: 10.1016/j.sleep.2020.05.011
3. González-Sanguino C, Ausín B, Castellanos MÁ, Saiz J, López-Gómez A, Ugidos C, et al. Mental health consequences during the initial stage of the 2020 coronavirus pandemic (COVID-19) in Spain. *Brain Behav Immun.* (2020) 87:172–6. doi: 10.1016/j.bbi.2020.05.040
4. Pieh C, Budimir S, Probst T. The effect of age, gender, income, work, and physical activity on mental health during coronavirus disease (COVID-19) lockdown in Austria. *J Psychosom Res.* (2020) 136:110186. doi: 10.1016/j.jpsychores.2020.110186
5. Joiner T. E. Jr, Pfaff, J. J., & Acres, J. G. (2002). A brief screening tool for suicidal symptoms in adolescents and young adults in general health settings: Reliability and validity data from the Australian National General Practice Youth Suicide Prevention Project. *Behaviour Research and Therapy*, 40(4), 471–481. doi:10.1016/S0005-7967(01)00017-1.
6. Arnett JJ, Žukauskiene R, Sugimura K. The new life stage of emerging adulthood at ages 18-29 years: implications for mental health. *Lancet Psychiatry.* (2014) 1:569–76. doi: 10.1016/S2215-0366(14)00080-7

7. Auerbach RP, Mortier P, Bruffaerts R, Alonso J, Benjet C, Cuijpers P, et al. WHO world mental health surveys international college student project: prevalence and distribution of mental disorders. *J of Abnorm Psychol.* (2018) 127:623–38. doi: 10.1037/abn0000362
8. Metzger IW, Blevins C, Calhoun CD, Ritchwood TD, Gilmore AK, Stewart R, et al. An examination of the impact of maladaptive coping on the association between stressor type and alcohol use in college. *J Am Coll Heal.* (2017) 65:534–41. doi: 10.1080/07448481.2017.1351445
9. Garrett R, Liu S, Young SD. A longitudinal analysis of stress among incoming college freshmen. *J Am Coll Heal.* (2017) 65:331–8. doi: 10.1080/07448481.2017.1312413
10. Arnett JJ. Emerging adulthood: a theory of development from the late teens through the twenties. *Am Psychol.* (2000) 55:469–80. doi: 10.1037/0003-066X.55.5.469
11. Moghanibashi-Mansourieh A. Assessing the anxiety level of Iranian general population during COVID-19 outbreak. *Asian J Psychiatr.* 2020;51:102076.
12. Smith GD, Ng F, Ho Cheung Li W. COVID-19: Emerging compassion, courage and resilience in the face of misinformation and adversity. *J Clin Nurs.* 2020;29(9-10):1425–8.
13. MacBeth A, Gumley A. Exploring compassion: a meta-analysis of the association between self-compassion and psychopathology. *Clin Psychol Rev.* 2012;32(6):545–52
14. Zessin U, Dickhäuser O, Garbade S. The Relationship Between Self-Compassion and Well-Being: A Meta-Analysis. *Appl Psychol Health Well Being.* 2015;7(3):340–64.

15. Gilbert P, Irons C. *Focused therapies and compassionate mind training for shame and self-attacking*. Compassion: Conceptualisations, research and use in psychotherapy; 2005. pp. 263–325.